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How Big Is the Deficit, Really?

"[T]he United States has been violating the principles of long-run fiscal solvency, although the nation is not yet insolvent. We are heading down the wrong road, but we've not yet reached the cliff."

"It took nearly 200 years for our nation to accumulate its first $1 trillion in debt, but only about four years to accumulate its second $1 trillion."

"Our nation's borrowing binge has reached the point where the amount of public debt owed by each man, woman, and child is now nearly $15,000."

Statements like these have become common. Americans are concerned about the budget deficit and government debt and are struggling for a way to put their size into perspective. Is there any way we can make sense of the budget deficit? Should we be concerned? How large is the deficit, really, and how large is our national debt? Understanding how to evaluate the government's budget deficit requires a mixture of accounting, economics and common sense.

The Conventional View of the Deficit

Chart 1 shows the components of the government's budget in a T account. On the expenditures side are government purchases (such as education and food stamps), Social Security outlays and interest. Interest is paid to those who own government debt: the domestic and foreign private sectors, foreign governments, the Social Security Trust Fund and the Federal Reserve.

On the right side of the chart, under receipts, are the government's sources of revenue: Social Security contributions, income and other taxes, the interest earned on the Social Security Trust Fund, Federal Reserve reimbursements to the U.S. Treasury and net sales of government bonds to the private sector and to the Fed.

To understand the deficit, analysts must assimilate these pieces of the budget in some serviceable way. This task involves determining how to deal with five key issues: Social Security, state and local budgets, interest on the public debt, the budgetary role of the central bank, and public-sector investment spending.

Five Steps in Evaluating the Deficit

Subtracting the Social Security Surplus. Social Security taxes and outlays should not be included when evaluating the government budget because the Social Security program is generally not a true "savings" program. Money contributed by

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Blue-Collar Outlook Not so Blue in Texas

"The key to remaining solvent is to prevent interest expenses from becoming too large. And the way to prevent interest expenses from becoming too large is to keep the growth of debt slower than the growth of income."

Chart 1
Total Budget of Government

Expenditures	Receipts
Government purchases	Social Security taxes
	Other tax receipts
Social Security outlays	
	Interest earned on the Social Security Trust Fund
Interest paid to the private sector, the Social Security Trust Fund and the Federal Reserve	
	Federal Reserve reimbursements
	Net sales of bonds to the private sector and the Federal Reserve

workers today is not generally saved and invested for their future retirement. Instead, the Social Security program is funded by "intergenerational transfers," transfers from today's younger, working generation to today's older, retired generation. The idea is that the same type transfer will be available in the future when today's younger generation retires, and so on.

The huge number of baby boomers, however, makes reliance wholly on intergenerational transfers undesirable, if not unfeasible. Accordingly, a Social Security Trust Fund has been established. Today's excess revenues—the Social Security receipts over and above outlays—are being accumulated, *on paper*, for disbursement during baby boomers' retirement. This is not to say that these funds are indeed being set aside, because in a very real sense they are not. They are being used, by law, to buy government debt. But on paper, the Social Security Trust Fund is accumulating a surplus, and it would not be prudent accounting to add this surplus to other funds used in day-to-day budget management.

Adding State and Local Budget Surpluses. Step two in analyzing the deficit is to consolidate the state and local government budget deficits or surpluses with those of the federal government. The idea here is that citizens have a demand for government services, regardless of whether they are provided at the federal, state or local level. Also, federal grants and revenue sharing with the states means that budget monies are interchangeable to a degree. So, the deficits of federal, state or local governments should be treated alike if we are to see the whole budget picture.

Accounting for Interest. It is sometimes said that to get the proper measure of the budget deficit, one must subtract interest outlays. The idea behind that claim is that interest *today* is the result of deficits *yesterday*, so interest should be excluded from the budget picture to get an accurate view of today's deficits.

There are essentially two approaches analysts may take with the treatment of public-sector interest: include such interest and look at the whole budget picture, or exclude such interest and focus on the primary deficit (the deficit excluding interest). Because it is more useful to see the whole budget picture, the approach taken here is to evaluate the total growth in government debt—growth due to debt-financing both current interest obligations and the current primary deficit—and later to compare this growth with that in the economy's income.[1]

Uncovering the "Hidden Tax." The next step is to recognize the role played by the central bank in the public-sector accounts. Because of the budgetary relationship between the Federal Reserve and the Treasury, not all interest paid on government debt represents net interest expenditures of the Treasury. Under the Monetary Control Act of 1980 (and, in practice, before its passage), interest earned by the Federal Reserve on its holdings of government securities is returned to the Treasury. Accordingly, each year the Federal Reserve reimburses to the Treasury its "excess profits," which consist mainly of such interest (currently on the order of $24 billion). Indeed, over the period 1950–91, the Federal Reserve reimbursed the Treasury nearly 99 percent of the Fed's interest earnings.

In short, these two items tend to offset one another and, therefore, may be removed from the budget. The reason to elaborate on this budgetary principle, however, is to uncover the hidden tax of money creation. Government budget deficits can be made smaller in the long run by the Federal Reserve's purchasing government debt—because the government's net interest obligation decreases as the central bank buys debt. But this deficit reduction can only be accomplished by the creation of money (in essence, by printing currency) *which raises prices.* So, the central bank can reduce the

deficit, but only through the tax of inflation.

Separating Government's Capital and Operating Budgets. Ideally, the final step in adjusting the deficit would be to subtract public-sector investment expenditures and receipts from the budgetary analysis. In principle, government's capital budget and operating budget should be separate, not commingled. One reason this is true is because the government may run a deficit *today* to finance its public-sector investment projects that will yield *future* budget surpluses. Such surpluses may result from government earnings on its investment projects or from the increased tax revenues of a stronger economy.

Clearly, it is not good accounting practice to mix investment funds—such as government outlays for a new airport—with year-to-year operating budget items—such as expenditures on food stamps. In practice, however, the capital and the operating budgets of government are commingled. Furthermore, there is no easy way to separate these two accounts based on the data currently available. Public-sector investment *expenditures* are identifiable, at least to some degree, but *receipts* from public-sector investment projects are not measurable, at least in any commonly acceptable way.

Reasonable estimates, however, suggest that the magnitude of error involved in this oversight is small. Public-sector investment spending today represents only about 5 percent of total federal spending. Thus, behind today's federal deficits, government apparently has no grand design to redirect resources toward profitable and valuable public investment projects—projects that would yield receipts and budget surpluses to repay tomorrow the monies borrowed today.

An Adjusted View of the Deficit

The result of these adjustments is a simplified, more relevant view of the budget deficit (*Chart 2*). Government runs a budget deficit when federal plus state and local government purchases, plus interest outlays (excluding those to the Federal Reserve) exceed income and other tax receipts (excluding Social Security). The deficit is financed by the sale of government bonds—that is, by adding to the national debt.

Table 1 shows the size of the adjusted budget deficit over the period 1950–92. But how do we evaluate the deficit's size in some meaningful way? When is the budget deficit *too* big?

To gain perspective on the deficit, one need only appeal to common-sense principles of personal budget management and ask, What is destructive personal borrowing behavior—behavior that can lead to long-run personal insolvency? The answer: spending at a rate that causes debt to grow faster than income.

Interest is the fixed burden that must be paid each period for debts previously incurred; interest is due annually as a percentage of one's debt; and income is one's ability to pay that interest. Eventually, one will be "buried" in debt if he or she accumulates financial obligations to the point where interest exceeds income. In this situation, the individual is bankrupt.

The key to remaining solvent is to prevent interest expenses from becoming too large. And the way to prevent interest expenses from becoming too large is to keep the growth of debt slower than the growth of income. Interest expenses can grow, but as long as they are growing slower than income, *ability* to pay is at least keeping up with *obligation* to pay.

Chart 2
Simplified Budget of Government

Expenditures	Receipts
Government purchases	Tax receipts
Interest outlays	Net sales of government bonds

"[F]or over a decade now, our nation's deficits have exceeded the guideline limit indicated by nominal growth of U.S. gross national product...."

Imminent Insolvency?

The need to keep debt from outgrowing income places a limit—a guideline maximum—on the size current deficits may reach without putting the government on the path to eventual bankruptcy. Table 2 shows the adjusted deficit relative to the existing debt (the growth in government debt, that is), together with the growth in the economy's income and guideline maximum deficits. An excessive deficit—defined as an deficit over and above the guideline maximum—is a warning signal. Such a level of deficit spending, if continued, will lead to public insolvency.

The numbers show that for over a decade now, our nation's deficits have exceeded the guideline limit indicated by nominal growth of U.S. gross national product (GNP). Government debt grew at an average

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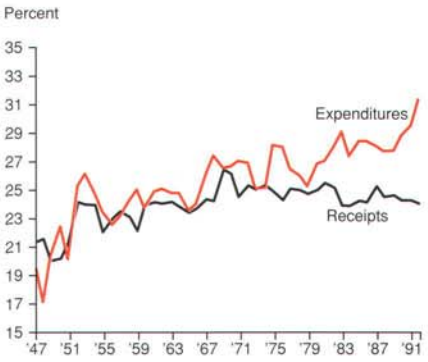
rate of 12.6 percent over the period 1980–92, while GNP growth averaged only 6.8 percent. The excess deficit has grown to $310 billion and shows no sign of receding.

Imminent Inflation?

One sobering thought is that, without the independent authority of the central bank, the government could always restore its balance sheet to solvency through inflation.[2] By printing money to repurchase the national debt, government could eliminate its debt and thereby eliminate its interest obligation. Such an action would restore the government's balance sheet to "solvency," but only through massive inflation (about 1100 percent at current levels of national debt). Essentially, the government would regain solvency by an involuntary transfer of resources from the private sector (particularly creditors) to the government (debtors).

That is the bad news. The good news, of course, is that the United States has not yet reached the point of insolvency. Government debt has not yet risen to the point at which the nation's interest bill is unmanageable. Interest in the fourth quarter of 1992—while double the level of 1980—is only about 4 percent of the economy's income.

Chart 3
Total Government Receipts and Expenditures as Shares of GNP



In short, the United States has been violating the principles of long-run fiscal solvency, although the nation is not yet insolvent. We are heading down the wrong road, but we've not yet reached the cliff.

The Spending Factor

Why is the deficit too big? Because of continued deficits in the primary budget? Because of slower GNP growth? Both reasons are valid. The economy's growth rate has slowed and has not kept pace with the interest rate on government debt.

Table 1
The Adjusted Deficit*

Year	Federal deficit	Social Security surplus	State and local surplus	Adjusted deficit
1950	–3.1	1.6	–1.3	–6.0
1960	.3	–.2	.4	.9
1970	–2.8	5.9	3.7	–5.0
1980	–73.8	–1.1	23.3	–49.4
1981	–79.0	–5.0	27.9	–46.1
1982	–128.0	–7.9	27.0	–93.1
1983	–207.8	.2	35.1	–172.9
1984	–185.4	.3	55.4	–130.3
1985	–212.3	9.4	54.4	–167.3
1986	–221.2	16.7	55.8	–182.1
1987	–149.8	19.6	43.8	–125.6
1988	–155.2	38.8	39.6	–154.4
1989	–153.5	52.8	43.1	–163.2
1990	–220.5	56.6	29.5	–247.6
1991	–268.7	52.2	24.5	–296.4
1992	–399.7	49.4	20.3	–428.8

*The adjusted deficit is the federal deficit minus the Social Security surplus plus the state and local surplus.

Table 2
Guideline, Adjusted and Excess Deficits

Year	Growth in public debt (Percent)	Growth in GNP (Percent)	Guideline maximum deficit	Adjusted deficit	Excess deficit*
1980	9.43	7.04	–41.5	–49.4	–7.9
1981	7.82	13.60	–90.5	–46.1	44.4
1982	13.99	2.61	–20.7	–93.1	–72.4
1983	21.85	9.01	–88.6	–172.9	–84.3
1984	13.26	10.39	–119.9	–130.3	–10.4
1985	14.50	6.41	–85.6	–167.3	–81.7
1986	13.62	5.15	–79.9	–182.1	–102.2
1987	8.09	6.46	–108.6	–125.6	–17.0
1988	9.18	8.17	–148.9	–154.4	–5.5
1989	8.95	6.93	–135.8	–163.2	–27.4
1990	12.63	5.35	–117.9	–247.6	–129.7
1991	13.44	2.66	–66.1	–296.4	–230.3
1992	17.28	4.28	–118.9	–428.8	–309.9

*The excess deficit is calculated as the adjusted deficit from Table 1 minus the guideline maximum deficit.

But, also, the U.S. government has continued to run a primary deficit, adding to its future interest burden. Thus, for both reasons, we find ourselves on a path to insolvency.[3]

The ultimate cause of the deficit, of course, must be either inadequate taxation or excessive spending. A look at spending and taxation suggests the answer. As Chart 3 shows, taxes (federal plus state and local taxes, excluding Social Security) as a share of GNP are down only slightly (from 24.7 percent to 24.1 percent) over the period 1979–92. Government spending as a share of GNP, however, has risen substantially—from 25.3 percent in 1979 to 31.3 percent in 1992. It is difficult, therefore, to view the deficit problem as one of a lack of taxes. The deficit stems more from a lack of economy—the prudence and the will to limit the growth of public spending.

Americans, therefore, have good reason to be concerned about the growing national debt. Unless this nation musters the will to limit the growth of public spending, unless we exercise prudence, we may well face national insolvency.

Thomas Jefferson understood the importance of fiscal constraint, and he cautioned against excessive government debt:

> I...place economy among the first and most important virtues, and public debt as the greatest of dangers to be feared.
>
> To preserve our independence, we must not let our rulers load us with perpetual debt....If we run into such debts...we will be taxed in our meat and drink, in our necessaries and in our comforts, in our labors and in our amusements.
>
> If we can prevent the government from wasting the labors of the people, under the pretense of taking care of them, they must become happy.
>
> — W. Michael Cox

[1] An alternative approach is to exclude interest and focus on the primary deficit as compared with zero. This is a steady-state approach, which *should* work if the real interest rate on government debt is equal to or less than the economy's long-run growth rate of real income (which it is, according to economic theory). The method chosen here does not rely on this hypothesis.

[2] See Cox, W. Michael (1992), "Two Types of Paper: The Case for Federal Reserve Independence," Federal Reserve Bank of Dallas *Southwest Economy*, November/December, 4–8.

[3] For most of the postwar period, the economy grew fast enough to offset the growth in interest payments. From 1947 to about 1980, GNP growth averaged 7.8 percent, which exceeded the average 3-percent interest rate on public debt. Since about 1980, however, the economy has grown at a slower pace (6.8 percent), and the interest rate on public debt has been unusually high (7.3 percent). Indeed, because the interest rate on government debt now exceeds the economy's growth rate, our nation's primary budget now needs to run in surplus to avoid the path to fiscal insolvency.